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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

**OCT 17 2007**

**Technology Center 2100**

Application Number: 10/620,857  
Filing Date: July 15, 2003  
Appellant(s): PAYTON ET AL.

\_\_\_\_\_  
Kelvin M. Vivian  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 07/12/2007 appealing from the Office action mailed 08/22/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

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**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,421,008	BANNING	5-1995
2005/0004911 A1	GOLDBERG	09-2002

Norman Murray, Norman Paton and Carole Goble, "Kaleidoquery: A Visual Query Language for Object Databases" ACM Press New York, 1998, pp. 447 – 257

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 – 8, 15 – 19, 2 – 25, 32 – 36, 39 – 42, 49 – 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banning et al. (Banning hereinafter) (US Patent No. 5,421,008) in view of Murray et al (NPL: "Kaleidoquery: A Visual Query Language for Object Databases", ACM Press 1998).

Regarding Claims 1, 18, and 35, Banning discloses an article of manufacture comprising a computer carrier readable by a computer and embodying one or more instructions executable by the computer, the computer program providing a query assist tool for assisting a user in creating and/or editing a query statement (Col. 5, lines 6 – 11, Banning), the query assist tool having a user interface for building queries and a query model definition to populate a query model instance with elements of the created query statement (Col. 5, lines 16 – 18, Banning), the user interface comprising:

a) program instructions for visually displaying a search condition of a query statement in a first display area of the user interface (Fig. 2, item 53, Col. 7, lines 58 – 65, Banning); and

b) program instructions for visually selecting two or more predicates of the displayed search condition for grouping (Fig. 2 and 14, item 51 and 574/573, Col. 8, and 30, lines 6 – 12 and 7 - 11, Banning<sup>1</sup>); and

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<sup>1</sup> Predicates are considered to be elements, such as, DEPT, SALARY, YEAR, JOB, DEPT, and MANAGER. This predicates are listed in the displayed search condition of Banning's disclosure (Fig. 2, item 53). In addition, other predicates would be YEAR>25 and SALARY>60000.

program instructions for visually indicating the grouping in the first display area in response to selection of the two or more predicates (Fig. 14, see window with title "Row Cond", Col. 30, lines 7 – 13, "...To rebuild a logical relationship for linking a predicate, a user selects the Group Action 572 of FIG. 14. Then, the user selects the nodes (predicates or logical operators) to group together. In this example, YEAR>25 574 and SALARY>60000 576 are selected. To reflect the selection process, the two entries are reverse-videoed as shown at 574 and 576 of FIG. 14...", window with title "Row Cond" in Fig. 14 corresponds to the first display area claimed, Banning).

However, Banning is silent with respect to a grouping including indentation, adjacent positioning, or delineation by a symbol. On the other hand, Murray discloses a method including means for indicating grouping comprising one or more of the group consisting of: indenting the grouped predicates relative to other predicates of the search condition (Page 251 and 253, para.46 and 61, lines 4 – 10 and 4 – 5; respectively, wherein "...max(select p.salary from p in People where p.name = 'Smith'..." shows indenting relative to "...and p. employer in (select c from c in Companies where c.location = 'England' )))...", Murray); positioning the grouped predicates adjacent to each other (Page 253, para. 61, line 5, wherein "part2:x.age> 40.." shows positioning adjacent to "...x.age<65...", Murray); and delineating the group with parenthesis or an equivalent symbol (Page 251 and 253, para. 46 and 61, lines 8 – 10 and 6 – 7, "... (select...'England')..." ; respectively, Murray). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings

of Murray, including the teachings of indentation, adjacent positioning, and group delineation with symbols, to the system and method of Banning to provide a highly organized and structured method to display queries, and provide novice query language users with a clear and understandable view of complex queries, for example, nested ones. Skilled artisan would have been motivated to do so, as suggested by Murray (Page 256, para. 12, lines 1 – 4, Murray), in order to organize the structures and ordering results that support a more dynamic evolution of queries. In addition, both of the references (Banning and Murray) teach features that are directed to analogous art and they are directed to the same field of endeavor, such as, databases management systems, query visualization, and grouping predicates. This close relation between both of the references highly suggests an expectation of success.

Regarding Claims 2, 19, and 36, the combination of Banning in view of Murray discloses an article of manufacture, wherein the program instructions for selecting further comprises program instructions for highlighting the two or more predicates (Fig. 2, item 51, DEPT and MANAGER, Col. 8, lines 10 – 12, Banning).

Regarding Claim 5, 22, and 39, the combination of Banning in view of Murray discloses all the limitations as disclosed above including a selecting predicates for grouping. In addition, the combination of Banning in view of Murray discloses a system and method for confirming the delete operation handled by a user. However, in an alternative embodiment, the combination of Banning in view of Murray discloses a

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confirmation of operation (Fig. 12, item 536, Col. 1, lines 59 – 62, Banning). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Banning in view of Murray to include a confirmation of selection of the delete operation to be used with grouping procedure. In addition, one of ordinary skill in the art at the time the invention was made would have been motivated to do so, in order to give users the capacity of validate and corroborate the selection of two or more grouped predicates for grouping.

Regarding Claims 6, 23, and 40, the combination of Banning in view of Murray discloses an article of manufacture, wherein the program instructions for indicating grouping are responsive to selection confirmation (Col. 29, lines 62 – 64, Banning<sup>2</sup>).

Regarding Claims 7, 24, and 41, the combination of Banning in view of Murray discloses an article of manufacture, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: selecting a confirmation button displayed in a second display area, entering a mouse click, entering a keystroke, and the equivalent of any of the foregoing (Fig. 12, item 536, Col. 29, lines 59 – 64, Banning).

Regarding Claims 8, 25, and 42, the combination of Banning in view of Murray discloses an article of manufacture, further comprising program instructions for causing



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a model instance to be updated with the selected grouping upon confirmation (Col. 29, lines 62 – 64, Banning<sup>3</sup>).

Regarding Claim 15 – 16, 32 – 33, and 49 - 50, the combination of Banning in view of Murray discloses all the limitations disclosed above including displaying query predicates in a first display area (Fig. 2, Col. 2, lines 54 – 57, Banning). However, the combination of Banning in view of Murray is silent with respect to displaying each search predicate in a different line of the first display area (Claims 15, 32, and 49), nor displaying each operator in a separate line of the first display area (Claims 16, 33, and 50). On the other hand, the combination of Banning in view of Murray discloses a system and method for displaying predicate queries including displaying operators and predicates in different lines of a display area (Page 251, para. 46, lines 1 – 10, Murray). It would have been obvious to one of ordinary skills in the art at the time the invention was made to display search predicates and operators in separate lines of the display area in order to provide users with better visualization of the predicates and operators of the queries.

Regarding Claim 17, 34, and 51, the combination of Banning in view of Murray discloses an article of manufacture, further comprising program instructions for

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<sup>2</sup> Banning discloses how the delete is completed when the user clicks ok. Because of the reasons explained in claim 5, the action of deleting after the user clicks on the confirmation window would correspond to indicating grouping after the selection confirmation.

<sup>3</sup> Banning discloses that after the user performs the confirmation, the update is performed in the system (Col 29, lines 62 – 64). In addition, Banning discloses that after the user selects the grouping of the predicates, the update of the selection is performed (Fig. 14, items 574 and 576).

receiving a query statement from an application for populating the interface (Col. 4 and 5, lines 57 – 64 and 6 – 11; respectively, Banning).

Regarding Claim 52, the combination of Banning in view of Murray discloses a query assist tool further comprising:

means for displaying at least a portion of the query statement in a second display area (Fig. 2, item 56 and 57, Col. 8, lines 19 – 22, Banning).

Regarding Claim 53, the combination of Banning in view of Murray discloses a method further comprising:

displaying at least a portion of the query statement in a second display area (Fig. 2, item 56 and 57, Col. 8, lines 19 – 22, Banning).

Regarding Claim 54, the combination of Banning in view of Murray discloses an article of manufacture further comprising:  
program instructions for displaying at least a portion of the query statement in a second display area (Fig. 2, item 56 and 57, Col. 8, lines 19 – 22, Banning).

Claims 9 – 14, 26 – 31, and 43 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banning et al. (Banning hereinafter) (US Patent No. 5,421,008), in view of Murray et al (NPL: "Kaleidoquery: A Visual Query Language for

Object Databases”, ACM Press 1998), and further in view of Goldberg et al. (Goldberg hereinafter) (US Patent Application Pub. No. 2005/0004911 A1).

Regarding Claims 9, 26, and 43, the combination of Banning in view of Murray discloses all the limitations as disclosed above including grouping query predicates based on users selection and a method for selecting grouped predicates (Col. 29, lines 56 – 59, Banning<sup>4</sup>). However, the combination of Banning in view of Murray is silent with respect to using the selecting method for grouped predicates for ungrouping. On the other hand, Goldberg discloses a graphical condition builder for facilitating database queries including ungrouping grouped predicates (Fig. 8, item 804, Page 9, [0092], lines 4 – 8, Goldberg). It would have been obvious to one of ordinary skills in the art at the time the invention was made to add the teachings of Goldberg, including ungrouping grouped predicates, to the system and method of the combination of Banning in view of Murray to provide a way to reverse or undo operations performed by users, such as grouping. Skilled artisan would have been motivated to do so to give users advanced capabilities, such as, fixing incorrect grouping of predicates.

Regarding Claims 10, 27, and 44, the combination of Banning in view of Murray and further in view of Goldberg combination discloses an article of manufacture, further comprising program instructions for removing the indications of grouping from the first display area in response to the step of selecting grouped predicates (Fig. 12, items 532

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<sup>4</sup> By clicking on the AND node, user is selecting the grouped predicates: YEAR> 25 and SALARY>60000.

and 536, Col. 29, lines 56 – 64, Banning; Fig. 8, items 804 and 802, lines 4 – 8, Goldberg).

Regarding Claims 11, 28, and 45, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above including a selecting grouped predicates for ungrouping (Fig. 8, item 804, Page 9, [0092], lines 4 – 8, Goldberg). In addition, the combination of Banning in view of Murray and further in view of Goldberg discloses a system and method for confirming the delete operation (Fig. 12, item 536, Banning). It would have been obvious to one of ordinary skills in the art at the time the invention was made to modify the combination of Banning in view of Murray and further in view of Goldberg teachings related to confirmation of selection of the delete operation to be used to the ungrouping procedure of the combination of Banning in view of Murray and further in view of Goldberg. In addition, one of ordinary skill in the art at the time the invention was made would have been motivated to do so, to give users the capacity of validate and corroborate the selection of two or more grouped predicates for ungrouping.

Regarding Claims 12, 29, and 46, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above and furthermore discloses an article of manufacture, further comprising program instructions for removing the indications of the grouping from the first display area in response to selection confirmation (Fig. 12, items 532 and 536, Col. 29, lines 56 – 64, Banning; Col.

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29, lines 62 – 64, Banning<sup>5</sup>; Fig. 8, items 804 and 802, Page 8, [0092], lines 4 – 8, Goldberg).

Regarding Claims 13, 30, and 47, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above and furthermore discloses an article of manufacture, wherein the program instructions for confirming further comprise program instructions for one or more of the group consisting of: a selectable button displayed in a second display area, a mouse click, a keystroke, and the equivalent of any of the foregoing (Fig. 12, item 536, Col. 29, lines 59 – 64, Banning).

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<sup>5</sup> Banning discloses how the delete is completed when the user clicks ok. Because of the reasons explained in claim 5, the action of deleting after the user clicks on the confirmation window would correspond to indicating grouping after the selection confirmation.

Regarding Claims 14, 31, and 48, the combination of Banning in view of Murray and further in view of Goldberg discloses all the limitations as disclosed above and furthermore discloses an article of manufacture, further comprising program instructions for updating a model instance with the selected ungrouping upon confirmation (Col. 29, lines 62 – 64, Banning<sup>6</sup>; Fig. 8, items 804 and 802, Page 8, [0092], lines 4 – 8, Goldberg).

#### **(10) Response to Argument**

1. Appellant requests review as to claims 1 – 8, 15 – 19, 22 – 25, 32 – 36, 39 – 42, and 49 – 54 and their rejection under 35 USC § 103(a) as being unpatentable over Banning in view of Murray.

In response to appellant's arguments against the references individually (Banning and Murray), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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<sup>6</sup> Banning discloses that after the user performs the confirmation, the update is performed in the system (Col 29, lines 62 – 64).

Appellant argues that the applied art (Banning and Murray); "Fails To Disclose Means For Visually Indicating A Grouping Of Two Or More Predicates In A First Display Area, In Which the Grouping Is Indicated By One Or More Of: Indenting The Grouped Predicates Relative to Other Predicates of A Search Condition, Positioning The Grouped Predicates Adjacent To Each Other, And Delineating The Grouped Predicates With Parenthesis Or An Equivalent Symbol." And with respect to Murray, appellant further argues that; "The cited portions refer to object query language statements that are not displayed to a user".

Examiner respectfully disagrees. First, in response to appellant's argument that the references fail to show certain features of appellant's invention, it is noted that the features upon which appellant relies (i.e., "Indicating A Grouping Of Two Or More Predicates...", and "In Which The Grouping Is...", and "...delineating The Grouped Predicates...") (as shown in Page 5, and 6, line 19 – 22 and 1; respectively, Appeal Brief) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Second, the combination of Banning in view of Murray does disclose the claimed limitation of; "visually indicating the grouping in the first display area (Fig. 14, see window with title "Row Cond", Col. 30, lines 7 – 13, "...To rebuild a logical relationship for linking a predicate, a user selects the Group Action 572 of FIG. 14. Then, the user selects the nodes (predicates or logical operators) to group together. In this example, YEAR>25 574 and SALARY>60000 576 are selected. To reflect the selection process,

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the two entries are reverse-videoed as shown at 574 and 576 of FIG. 14...", window with title "Row Cond" in Fig. 14 corresponds to the first display area claimed, Banning), wherein the means for indicating the grouping further comprises one or more of the group consisting of: indenting the grouped predicates relative to other predicates of the search condition (Page 251 and 253, para.46 and 61, lines 4 – 10 and 4 – 5; respectively, wherein "...max(select p.salary from p in People where p.name = 'Smith'..." shows indenting relative to "...and p. employer in (select c from c in Companies where c.location = 'England' )))...", Murray); positioning the grouped predicates adjacent to each other (Page 253, para. 61, line 5, wherein "part2:x.age>40.." shows positioning adjacent to "...x.age<65...", Murray); and delineating the group with parenthesis or an equivalent symbol (Page 251 and 253, para. 46 and 61, lines 8 – 10 and 6 – 7, "... (select...'England')..." ; respectively, Murray).

Third, with respect to appellant's argument that Murray does not teach displaying to a user, Examiner makes note that the claims do not recite the specific wording "displayed to a user". However, the combination of Banning in view of Murray does disclose such feature. As shown above, the Banning reference teaches features directed to visually indicating grouped predicates. Wherein Banning makes such visual indication by displaying to a user (See for example, Col. 30, lines 29 – 31, "...The user is always isolated from the internal changes and only focuses on the displayed, graphical representation of the internal processing...", Banning). Specifically, the Murray reference has been incorporated to the rejection to provide more details on grouping and for formatting purposes only, such as for example, indenting the grouped predicates



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relative to other predicates, adjacent positioning, and delineating the group with parenthesis.

2. Appellant requests review as to claims 9 – 14, 26 – 31, and 43 – 48 and their rejection under 35 USC § 103(a) as being unpatentable over Banning and Murray, in further view of Goldberg.

Appellant's arguments directed towards the rejection of claims 9 – 14, 26 – 31, and 43 – 48 reiterate deficiencies Appellant feels were made in the rejection of the independent claims, and do not address any new points. Therefore, the examiner submits that is the rejection of the independent claims is deemed proper, the rejection of claims 9 – 14, 26 – 31, and 43 – 48 should also be upheld.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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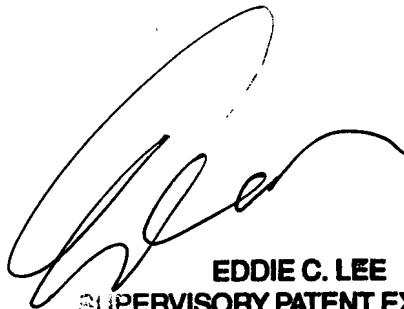
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



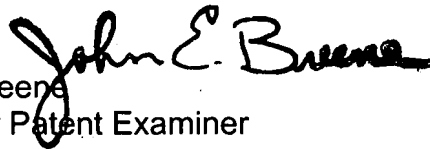
Giovanna B. Colan  
Examiner  
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Conferees:



Eddie Lee  
TQAS/Appeals Specialist  
TC 2100

**EDDIE C. LEE**  
**SUPERVISORY PATENT EXAMINER**



John E. Breene  
Supervisor Patent Examiner  
AU 2162

An appeal conference was held on 06 March 2007, and it was agreed to proceed to the board of appeals.